

CLAIMS

Listing of Claims:

Claim 1. (Withdrawn) An isolated nucleic acid molecule having:

- (a) a nucleotide sequence as set forth in SEQ ID NO: 1;
- (b) a nucleotide sequence encoding a polypeptide having the amino acid sequence shown in SEQ ID NO: 2;
- (c) a nucleotide sequence with at least 85% identity to the sequence of (a) or (b);
- (d) a subsequence of a least 50 consecutive nucleotides of a sequence of (a), (b) or (c), with the proviso that said subsequence does not fall between nucleotide 1027 and nucleotide 1076 of SEQ ID NO: 1; or
- (e) a nucleotide sequence complementary to any of the nucleotide sequences in (a),(b)* (c) or (d).

Claim 2. (Withdrawn) The nucleic acid of claim 1 having said nucleotide sequence with at least 85% identity to the sequence of (a) or (b).

Claim 3. (Withdrawn) The nucleic acid of claim 1 encoding a polypeptide having the amino acid sequence shown in SEQ ID NO: 2.

Claim 4. (Withdrawn) The nucleic acid of claim 1 having a subsequence of a least 50 consecutive nucleotides, which is antisense to SEQ ID NO:1 or a sequence having at least 85% identity thereto.

Claim 5. (Withdrawn) A nucleic acid vector comprising the nucleic acid molecule of claim 1.

Claim 6. (Withdrawn) A host cell comprising the vector of claim 5.

Claim 7. (Withdrawn) An isolated polypeptide having:

- (a) an amino acid sequence as set forth in SEQ ID No. 2;

- (b) an amino acid sequence with at least 85% identity to the sequence of (a); or
- (c) a subsequence of at least 30 consecutive amino acids of the sequence of (a) or (b), with the proviso that said subsequence does not fall within amino acid nos. 1102 and 1152 of SEQ ID NO:2.

Claim 8. (Withdrawn) The polypeptide of claim 7, wherein said amino acid sequence in (b) comprises a conservative substitution of at least one amino acid in said amino acid sequence of SEQ ID: NO: 2.

Claim 9. (Withdrawn) The polypeptide of claim 7, wherein said polypeptide has stem cell differentiation inducing activity.

Claim 10. (Withdrawn) The polypeptide of claim 7, said polypeptide having the amino acid sequence shown in SEQ ID NO: 2.

Claims 11-13. (Cancelled)

Claim 14. (Withdrawn) The use of an antibody that specifically recognizes tenascin W for the manufacture of a medicament, for the prophylaxis or treatment of cancer.

Claim 15. (Withdrawn) The use as claimed in claim 14, wherein said cancer is metastatic.

Claim 16. (Withdrawn) The use as claimed in claim 14, wherein the cancer is a solid tumour.

Claim 17. (Withdrawn) The use as claimed in claim 14, wherein the cancer is a glioblastoma, prostate, lung, colorectal, osteo- or breast carcinoma.

Claim 18. (Withdrawn) The use of an antibody that specifically recognizes tenascin W for the prophylaxis or treatment of a bone disease resulting from excessive bone growth.

Claim 19. (Withdrawn) A composition comprising an isolated nucleic acid molecule having a nucleotide sequence selected from the group consisting of:

- (a) a nucleotide sequence as set forth in SEQ ID No. 1 or SEQ ID No. 3;
- (b) a nucleotide sequence encoding the amino acid sequence shown in SEQ ID NO: 2 or SEQ ID NO: 4;
- (c) a nucleotide sequence with at least 35% identity to any one of the sequences of (a) or (b);
- (d) a subsequence of a least 15 consecutive nucleotides of the sequence of (a),(b) or (c); and
- (e) a nucleotide sequence complementary to (a),(b), (c), or (d), and a pharmaceutically acceptable excipient, diluent or carrier.

Claim 20. (Withdrawn) The composition of claim 19, wherein said nucleic acid molecule has a subsequence that is antisense to SEQ ID NO:1 or SEQ ID NO:3.

Claim 21. (Withdrawn) The composition of claim 19, said composition comprising said isolated nucleic acid molecule encoding the amino acid sequence shown in SEQ ID NO: 2 or SEQ ID NO:4.

Claim 22. (Withdrawn) A composition as claimed in claim 19 for use as a pharmaceutical.

Claim 23. (Withdrawn) The use of the compositions of claim 19 for the manufacture of a medicament for the prophylaxis or treatment of cancer.

Claim 24. (Withdrawn) The use of the compositions of claim 19 for the manufacture of a medicament for the prophylaxis or treatment of bone pathologies.

Claim 25. (Withdrawn) A composition comprising tenascin-W and a pharmaceutically acceptable excipient, diluent or carrier.

Claim 26. (Withdrawn) The composition of claim 25, wherein said tenascin-W is recombinant.

Claim 27. (Withdrawn) A composition as claimed in claim 25, wherein said tenascin-W is a polypeptide having:

- (a) an amino acid sequence as set forth in SEQ ID No. 2 or 4;
- (b) an amino acid sequence with at least 35% identity to the sequence of (a); or
- (c) a subsequence of at least 30 consecutive amino acids of the sequence of (a) or

Claim 28. (Withdrawn) The composition of claim 27, said composition comprising said polypeptide encoding the amino acid sequence shown in SEQ ID NO: 4.

Claim 29. (Withdrawn) A composition as claimed in claim 25 for use as a pharmaceutical.

Claim 30. (Withdrawn) The use of the compositions of claim 25 for the manufacture of a medicament for the treatment or prophylactic treatment of any disease or condition requiring increased tenascin-W levels, e.g. thrombosis, wound healing or atherosclerosis, or for the treatment or prophylactic treatment of a condition ameliorated by the promotion of osteogenesis, e.g. bone healing, osteoporosis.

Claim 31. (Withdrawn) A method for treatment or prophylactic treatment of a disease or condition requiring increased tenascin-W levels, e.g. thrombosis, wound healing, atherosclerosis, bone healing and osteoporosis, said method comprising administering an effective amount of the compositions of claim 25 to an individual in need of such treatment.

Claim 32. (Withdrawn) A method of inducing stem cell differentiation into bone cells, said method comprising contacting a suitable stem cell with an effective amount of the composition of claim 25.

Claim 33. (Withdrawn) The method of claim 32, wherein said stem cell is a mesenchymal stem cell.

Claim 34. (Withdrawn) The use of tenascin-W as a stem cell marker.

Claim 35. (Withdrawn) A method for identifying modulators of tenascin W function, said method comprising contacting a test compound with a tenascin-W expressing cell and then measuring a change in one or more of:

- (a) cell proliferation, e.g, cell progression entering S-phase of the cell cycle;
 - (b) DNA synthesis;
 - (c) cell adhesion;
 - (d) cell spreading;
 - (e) focal adhesion and actin stress fibre formation on fibronectin; or
 - (f) cell binding to extracellular matrix (ECM) relative to when said test compound is
- (a) absent.

Claim 36. (Withdrawn) A method as claimed in claim 35, further comprising measuring a change in tenascin-W expression in the absence and presence of said test compound.

Claim 37. (Withdrawn) A method as claimed in claim 35, wherein said cell is a human cell.

Claim 38. (Withdrawn) A method as claimed in claim 35, wherein said cell is present in a tissue sample.

Claim 39. (Withdrawn) A method as claimed in claim 35, wherein said cell is present in a blood sample.

Claim 40. (Withdrawn) A method for identifying modulators of tenascin W function, said method comprising:

- (a) contacting a test compound with tenascin W and/or alpha8 beta1 integrin, and
 - (b) measuring the binding of said test compound to tenascin W and/or alpha8beta1 integrin,
- or

- (c) measuring a disruption of binding of tenascin-W to alpha8 betal integrin, relative to when said test compound is absent.

Claim 41. (Withdrawn) A method as claimed in claim 40, further comprising measuring the binding of a control compound to tenascin-W.

Claim 42. (Withdrawn) A method as claimed in claim 40, wherein said tenascin-W is attached to a solid surface.

Claim 43. (Withdrawn) A method as claimed in claim 41, wherein said binding is detected using an antibody labelled with a fluorescent label, a fluorescence quencher, a radioactive label, a scintillant or an enzyme.

Claim 44. (Withdrawn) A method as claimed in claim 41, wherein a decrease in binding of tenascin-W to alpha8 betal integrin is indicative of an inhibitor of tenascin W function.

Claim 45. (Withdrawn) A substance for the prevention or the prophylactic treatment of a disease or condition dependent on tenascin-W, identified by a method as claimed in claim 40.

Claim 46. (Withdrawn) A method of diagnosing or prognosing cancer comprising:

- (a) analysing a sample obtained from an individual for the presence of tenascin-W protein or transcript
- (b) correlating the presence of tenascin-W with an unfavourable prognosis or diagnosis.

Claim 47. (Withdrawn) A method of diagnosing or prognosing cancer as claimed in claim 46, comprising correlating in (b) an elevated level of tenascin-W protein or transcript relative to healthy tissue with an unfavourable prognosis or diagnosis.

Claim 48. (Withdrawn) A method of diagnosing or prognosing cancer as claimed in claim 46; wherein said sample is blood serum or plasma from an individual.

Claim 49. (Withdrawn) A method of diagnosing or prognosing cancer as claimed in claim 46, further comprising analyzing said sample for the presence of alpha 8 integrin expression, the presence of said alpha 8 integrin correlating with an unfavourable prognosis or diagnosis.

Claim 50. (Withdrawn) A method of diagnosing or prognosing cancer as claimed in claim 46, further comprising propagating cells in said sample in cell culture.

Claim 51. (Withdrawn) A method of diagnosing or prognosing cancer as claimed in claim 48, wherein said tenascin-W protein is detected using an antibody specific for tenascin-W.

Claim 52. (Withdrawn) A method of diagnosing or prognosing cancer as claimed in claim 48, wherein said tenascin-W transcripts are detected using a polymerase chain reaction.

Claims 53- 57. (Cancelled)

Claim 58. (Previously presented) An isolated antibody that specifically recognizes amino acids 791-1054 of the polypeptide having the amino acid sequence shown in SEQ ID NO: 4.

Claim 59. (Previously presented) The isolated antibody of claim 58, for the manufacture of a medicament.

Claim 60. (Previously presented) The isolated antibody of claim 59, wherein said medicament is for the treatment of breast cancer.

Claims 61- 64. (Cancelled)

Claim 65. (Previously presented) An isolated antibody that specifically recognizes one or more of the three C-terminal fibronectin III repeats of mammalian tenascin W.

Claim 66. (Previously presented) The isolated antibody of claim 65, wherein said antibody specifically recognizes one or more of the three C-terminal fibronectin III repeats in the region comprising amino acids 791-1054 of the tenascin W polypeptide having the amino acid sequence shown in SEQ ID NO: 4.

Claim 67. (Previously presented) The isolated antibody of claim 66, for the manufacture of a medicament.

Claim 68. (Previously presented) The isolated antibody of claim 67, wherein said medicament is for the treatment of breast cancer.

Claims 69- 72. (Cancelled)